



Officers and staff from the U.S. Naval Medical Research Unit No. 2 (NAMRU-2) accepted the Cambodian Royal Order of Monisaraphon for their assistance in capacity building related to three Cambodia hospitals, July 7, 2017. (U.S. Navy photo by Katherine Berland)

## GLOBAL HEALTH ENGAGEMENT: A PERSPECTIVE ON BUILDING & STRENGTHENING RELATIONSHIPS

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A growing focus within Navy Medicine is Global Health Engagement (GHE). GHE activities are opportunities for our medical personnel to engage with partner nations to strengthen medical capacity, achieve interoperability, exchange information and build relationships.

I saw the value of Global Health Engagement firsthand while stationed at the Naval Medical Research Unit-2 (NAMRU-2) in Phnom Penh, Cambodia. While at this detachment, we worked with the Cambodian military to establish a disease surveillance program. In this role, I utilized my scientific expertise, but I also had to focus on diplomacy, as the success of our medical mission was contingent on our ability to work cooperatively with the Cambodian military and to collectively foster trust.

Our team experienced trials and successes, and I walked away from this project with lasting lessons learned about the value that strategic Global Health Engagements can have. The positive ramifications of our mission reached far beyond the conclusion of my time in Phnom Penh, and the legacy of the successful engagement continues to strengthen the relationship between our nations.

**From the Ground Up**

In the spirit of developing a medical military-to-military (mil-mil) relationship with Cambodia, NAMRU-2 began to engage the Royal Cambodian Armed Forces (RCAF)-Department of Health in 2011. Our detachment sought to determine how disease surveillance was being performed in Cambodia in order to establish a Disease, Non-Battle Injuries (DNBI) surveillance program for the Cambodian military.

DNBI are medical incidences that occur outside of direct combat, like when personnel fall ill to malaria or sprain an ankle during training. DNBI generally affect a much greater number of troops than direct-combat injuries do, resulting in a loss of manpower and increasing the need for medical interventions.

Understanding DNBI is critical for understanding the health and readiness of the troops, and an initial assessment of RCAF capabilities demonstrated there was not a regular, coordinated system by which DNBI was being tracked and reported. It was from this baseline that we instituted a ground up program to support the establishment of DNBI reporting within RCAF.

### **Partner Nation Approval**

Not long after I arrived in 2012, this effort became one of my projects to manage. Initially, efforts were focused not on the design and implementation of a DNBI tracking system, a task to which I was accustomed, but rather, working with the RCAF-Department of Health to develop and provide presentations to the various RCAF commanders explaining the process and how it would benefit their troops. Working closely with both the Department of Health and our own NAMRU-2 team over a period of several months, we were able to obtain approval to conduct DNBI surveillance in one military region and at two naval stations in Cambodia. The previous months had shown me the importance of clear communication and cultural understanding. We needed to gain the trust of our partners to ensure they maintained ownership of the project and would champion it within their commands.

### **Choosing your Platform**

A critical key to GHE is staying on pace with your partner nation's needs and capabilities. Just because we may have access to the latest and greatest gadgets and gizmos, these tools may not get the job done efficiently and sustainably within the partner nation. To design a viable DNBI surveillance program, we chose to start simple.

First, we developed a three digit alpha-numeric code for each DNBI symptom which could be easily relayed via text message. For example, a medic seeing a patient who presented with influenza-like illness would text "D4-1".

We then provided medical personnel at unit hospitals, clinics and field medic stations with basic cell phones to text in these symptoms. These texts were sent to a smartphone at the headquarters for the units, where they were downloaded into a computer database and forwarded to the RCAF-Department of Health for analysis. This entire process only required a few dozen text-enabled phones, four smart phones and six computer terminals. For a minimal investment, RCAF now had a sustainable and functional system that was built on existing infrastructure and would provide DNBI data in real time.

## **Training**

Surveillance data is only as good as the quality of data collected and the analysis performed. The largest effort that NAMRU-2 undertook in this process was training RCAF medical staff to operate the system and collect, enter and interpret the DNBI data. Our staff conducted extensive training programs both in the field and at the various headquarters to ensure that all involved developed the expertise to operate and manage the system. In addition, we conducted regular refresher training to reinforce the initial training and account for any personnel turnover. With an eye on sustainability, NAMRU-2 provided in-depth, focused training to key RCAF staff to allow them the capabilities to provide future trainings, i.e. "train the trainer."

## **Implementation**

After we had a system in place to collect and analyze data and the personnel trained in the operation of the system, we then turned our attention to the actual data. What could the RCAF-Department of Health do with the data collected? This question presented a key juncture in the mission. We needed to work with our partners to ensure the data would be used to meet their needs in an effective and sustainable way.

In the first two years of the program, we supported RCAF in their use of DNBI data to direct what medical supplies should be provided to the units based upon their identified DNBI needs. This approach demonstrated the value of the program to RCAF and allowed time to build key infrastructure to further utilize the DNBI data.

As more RCAF personnel continued to recognize and embrace the program, the data supply continued to grow. We went from operating in three locations and receiving around 4,500 DNBI reports (i.e. texts) in 2012 to receiving more than 37,000 reports from six regions in Cambodia by 2016.

Additionally, in partnership with the RCAF-Department of Health, we began implementing a health response program to utilize the surveillance data to identify disease trends and outbreaks. At the end of

my tenure in Cambodia, together we had created a simple, reliable, accurate and most importantly, sustainable DNBI surveillance program within RCAF from the ground up.

### **Value to the U.S.**

While the development of the DNBI surveillance program is of clear benefit to the RCAF, we must always remember that we conduct GHEs to support the missions of the U.S. Navy and DoD in the region. Of the many benefits that came to the U.S. from this program, three stand out.

The first, and perhaps most obvious, is that we now had a surveillance program that the U.S., in cooperation with Cambodia, can use to evaluate regional disease threats and potential outbreaks for use in force health protection planning in the area of responsibility (AOR).

Secondly, through our cooperative work, we were able to continue to improve our relations with Cambodia, a key partner in the Pacific Command AOR.

Perhaps most importantly, NAMRU-2 built an atmosphere of trust with our Cambodian partners. Afterward, RCAF expanded our mil-mil health engagements to additional military regions in Cambodia, setting the stage for additional non-health mil-mil engagements with the U.S.

Global Health Engagement programs in Cambodia continue to build on over two decades of NAMRU-2 and Cambodian cooperation in an effort to identify and mitigate infectious diseases. What began as a simple DNBI surveillance program has led to the establishment of two new diagnostic clinics in previously underserved locations within the Cambodian military. It is through programs such as this that the United States can support force health requirements of the combatant commands and bolster partner nations' health infrastructures.

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